

ARTHRITIS

General term that describes diseases that affect the joints of the skeleton and limit movement.

ATRIUM (PLURAL ATRIA)

One of two (left and right) upper chambers of the heart.

AXON

Also called a nerve fiber, the long “tail” of a neuron that transmits nerve impulses to another neuron or muscle fiber.

B

BACTERIA (SINGULAR: BACTERIUM)

Group of simple, single-celled microorganisms. Some of them can cause disease in humans.

BICEPS BRACHII

Muscle that bends the arm at the elbow.

BRAIN STEM

Part of the brain that controls basic life processes such as breathing and heart rate.

BRONCHI (SINGULAR BRONCHUS)

Branches of the trachea (windpipe) that divide into further bronchi inside the lungs.

BRONCHIOLE

Branch of a bronchus, and smallest airway in the lung.

C

CALCIUM

Mineral that forms the hard part of bones and teeth.

CAPILLARY

Tiny blood vessel that carries blood between arteries and veins.

CELL

Microscopic living unit, trillions of which make up the human body.

CEREBRAL HEMISPHERES

Two halves of the cerebrum—the largest part of the brain, which is involved in conscious thought.

CERUMEN

Waxy secretion produced by lining of ear canal.

CILIA

Microscopic, hairlike structures that project from the surface of certain cells.

CILIATED CELL

Cell that carries cilia on its surface.

COLLAGEN

Tough, fibrous protein that strengthens connective tissues such as bone and cartilage.

CORTICOSTEROID

Steroid hormone released by the adrenal gland that is involved in the immune response, and a synthetic drug that is used to reduce inflammation.

CT (COMPUTED TOMOGRAPHY) SCAN

Technique that uses X-rays and a computer to produce images of living tissues.

D

DISEASE

Disorder caused by a malfunction in one or more body systems.

DNA (DEOXYRIBONUCLEIC ACID)

One of a number of large molecules found inside a cell that carry the instructions for its construction and operation.

E

EPIDERMIS

Upper protective layer of the skin from which dead cells are lost constantly as skin flakes.

EPIGLOTTIS

Flap of cartilage that folds over, sealing the entrance to the larynx during swallowing.

G

GASTRIC

Describes something relating to the stomach.

GENE

One of the “instructions” carried on genetic material, such as DNA.

GENETIC MATERIAL

General name for molecules such as DNA that carry the instructions to build an organism.

GERM

General term for a microorganism, especially a bacterium, which causes disease.

GLAND

Tissue or organ that produces a substance, such as adrenalin or sweat, which is released into or onto the body.

GLUCOSE

Body’s primary energy source, and main sugar circulating in the blood.

GLYCOGEN

Large carbohydrate molecule made up of glucose units that is the main energy store in the liver and muscles.

GOBLET CELL

Type of epithelial cell that produces mucus.

H

HAIR FOLLICLE

Deep pit in the skin from which a hair grows.

HISTAMINE

Substance released by cells that triggers inflammation.

TYPES OF BODY CELLS

The human body is constructed from about 100 trillion microscopic, living building blocks called cells. There are more than 200 types of cells that vary in shape, size, location, and the job they do. However, they all share the same basic structure.

RODS AND CONES

Found in the eye and named for their cell shape, rods (yellow) and cones (blue) are photoreceptors. They detect light and send nerve impulses to the brain, enabling us to see.

x 750 SEM

KIDNEY CELL

Located inside each kidney, this tubular cell is covered in folds. These greatly increase its surface area for absorbing water back into the bloodstream, in order to concentrate urine.

x 5,200 SEM

FAT CELL

This section through a fat cell shows most of the space inside taken up by oil droplets (yellow) that push the nucleus (purple) to one side. Fat cells store energy and insulate the body.

x 1,000 TEM

BONE CELL

An osteocyte, or bone cell, sits isolated inside its lacuna (space) surrounded by hard bone tissue. Bone cells are responsible for maintaining all the body’s bones.

x 5,000 SEM

GLIAL CELLS

These star-shaped astrocytes (green) support neurons, the cells that carry nerve impulses. Astrocytes belong to the glial cells that make up 90 percent of nervous system cells.

x 165 LM